

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561914

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

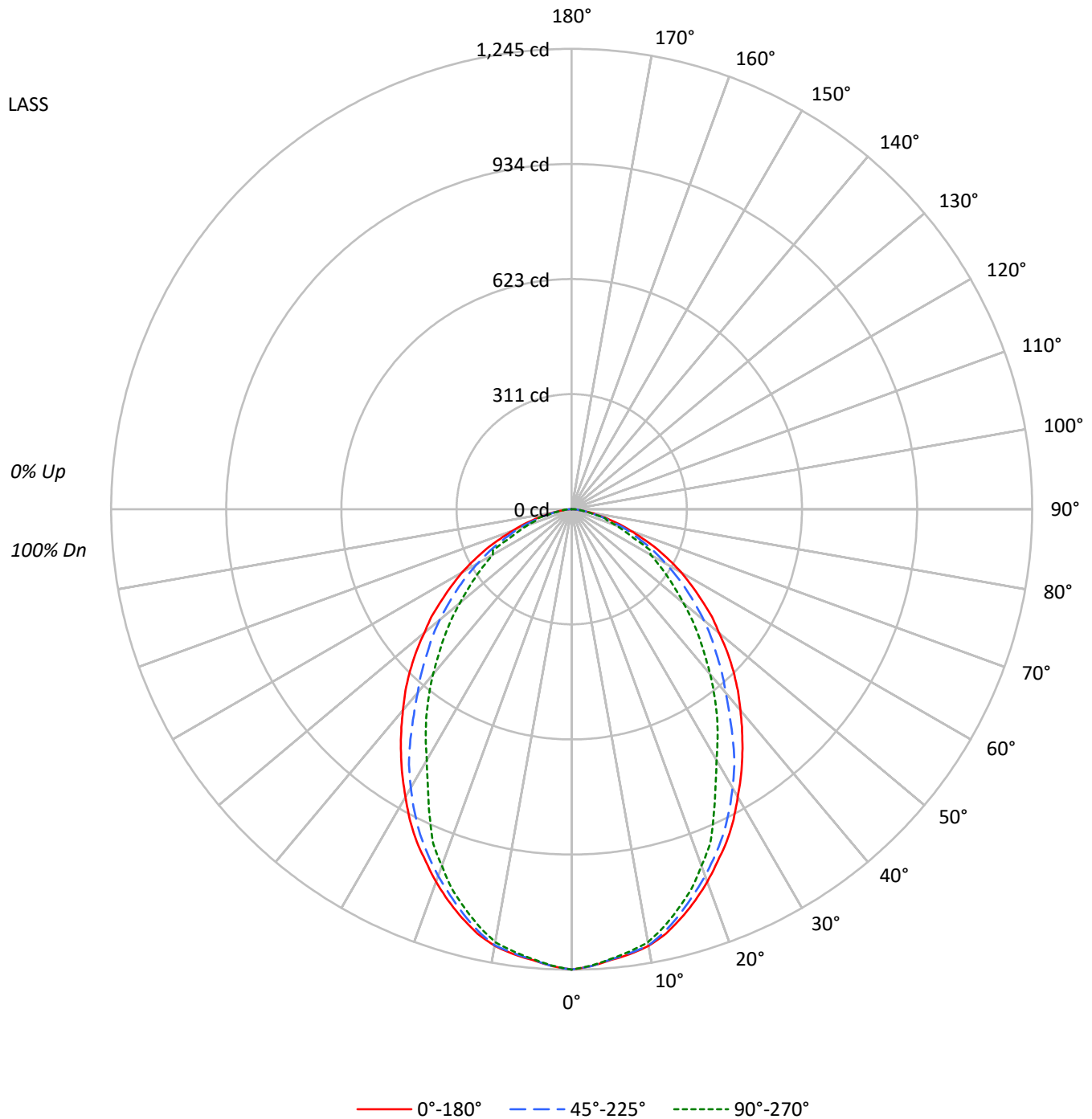
Lumens per Lamp: N/A
Luminaire Lumens: 2444.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561914
CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561914

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1675	1675	1675
5°	1652	1650	1648
10°	1638	1636	1624
15°	1594	1578	1556
20°	1535	1511	1469
25°	1472	1440	1350
30°	1395	1351	1216
35°	1321	1248	1125
40°	1246	1138	1024
45°	1175	1052	926
50°	1088	976	826
55°	1006	885	739
60°	922	790	662
65°	811	692	586
70°	668	606	498
75°	531	464	487
80°	357	335	312
85°	222	267	310

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1175 cd/sqm



TEST NUMBER: P561914

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	4.7
10°-20°	318.0	13.0
20°-30°	440.3	18.0
30°-40°	469.5	19.2
40°-50°	428.3	17.5
50°-60°	335.6	13.7
60°-70°	218.7	8.9
70°-80°	96.9	4.0
80°-90°	20.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	874.2	35.8
0°-40°	1343.7	55.0
0°-60°	2107.6	86.2
0°-90°	2444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1245	1245	1245	1245	1245	
5°	1223	1222	1222	1220	1220	116
15°	1144	1144	1133	1121	1117	322
25°	992	986	970	936	910	455
35°	804	799	760	702	685	503
45°	617	604	553	507	486	476
55°	429	416	377	332	315	385
65°	255	240	217	222	184	251
75°	102	95	89	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



TEST NUMBER: P561914

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-80-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1244.9	1244.9	1244.9	1244.9	1244.9
2.5°	1236.3	1236.3	1236.3	1234.9	1234.9
5°	1223.4	1221.9	1221.9	1220.5	1220.5
7.5°	1213.3	1211.8	1210.4	1209.0	1206.1
10°	1198.9	1198.9	1197.4	1190.2	1188.8
12.5°	1175.9	1174.4	1168.7	1158.6	1155.7
15°	1144.2	1144.2	1132.7	1121.2	1116.8
17.5°	1109.7	1108.2	1093.8	1082.3	1076.6
20°	1072.2	1069.4	1055.0	1036.3	1026.2
22.5°	1030.5	1030.5	1013.2	988.8	978.7
25°	991.6	985.9	970.0	935.5	909.6
27.5°	947.0	938.4	921.1	872.2	842.0
30°	898.1	893.8	869.3	806.0	782.9
32.5°	852.0	844.8	818.9	752.7	734.0
35°	804.5	798.8	759.9	702.3	685.1
37.5°	757.0	749.8	700.9	654.9	633.3
40°	709.5	700.9	647.7	605.9	582.9
42.5°	664.9	653.4	601.6	557.0	531.1
45°	617.4	604.5	552.7	506.6	486.5
47.5°	569.9	558.4	510.9	463.4	440.4
50°	519.6	509.5	466.3	418.8	394.4
52.5°	477.8	462.0	420.3	372.8	352.6
55°	428.9	415.9	377.1	332.5	315.2
57.5°	384.3	371.3	335.3	293.6	279.2
60°	342.5	323.8	293.6	257.6	246.1
62.5°	296.5	282.1	256.2	226.0	240.4
65°	254.7	240.4	217.3	221.6	184.2
67.5°	208.7	201.5	181.3	161.2	155.4
70°	169.8	161.2	154.0	132.4	126.7
72.5°	135.3	126.7	116.6	105.1	100.7
75°	102.2	95.0	89.2	84.9	93.6
77.5°	70.5	67.6	63.3	59.0	57.6
80°	46.1	44.6	43.2	41.7	40.3
82.5°	27.3	27.3	27.3	27.3	27.3
85°	14.4	15.8	17.3	18.7	20.1
87.5°	8.6	8.6	10.1	11.5	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)